Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Withdrawn) An external defibrillator comprising
defibrillator electrodes, and
a piezoelectric polymer pulse sensor.

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2. (Withdrawn) The external defibrillator of claim 1 further comprising instrumentation for performing an ECG analysis.

3. (Withdrawn) The external defibrillator of claim 1 further comprising instrumentation for analyzing a signal obtained from the pulse sensor.

4. (Withdrawn) The external defibrillator of claim 1 wherein said pulse sensor is self-shielded.

5. (Withdrawn) The external defibrillator of claim 1 further comprising a strap for attaching said pulse sensor to a patient's neck.

6. (Withdrawn) The external defibrillator of claim 1 wherein said piezoelectric pulse sensor is mounted on one of said defibrillator electrodes.

7. (Withdrawn) The external defibrillator of claim 1 further comprising a display constructed to display information to a user.

8. (Withdrawn) The external defibrillator of claim 7 further comprising instrumentation for performing an ECG analysis, instrumentation for analyzing a signal obtained from the pulse sensor, and instrumentation for converting the results of the ECG analysis and signal analysis into a message to be displayed to the user or provided as an auditory prompt.

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9. (Withdrawn) A medical device comprising

a piezoelectric polymer pulse sensor; and

a strap constructed to allow the pulse sensor to be attached to a patient's neck.

10. (Withdrawn) The medical device of claim 9 wherein the pulse sensor is self-shielded.

11. (Withdrawn) The medical device of claim 9 wherein the strap comprises an elastic material.

12. (Withdrawn) The medical device of claim 9 further comprising a cable to connect the pulse sensor to instrumentation.

13. (Withdrawn) A medical device comprising

a piezoelectric polymer pulse sensor, and

a foam pad having a first surface to which the pulse sensor is attached, and a second surface constructed to be attached to a patient.

14. (Withdrawn) The medical device of claim 13 wherein the second surface includes a layer of pressure-sensitive adhesive.

15. (Currently Amended) A method of treating a patient showing signs of possible cardiac arrest comprising:

applying a piezoelectric pulse sensor to the patient at a location near a blood vessel that expands as a result of blood pulsing through the vessel, the piezoelectric pulse sensor being configured to detect mechanical motion resulting from the expansion of the blood vessel;

processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse, wherein the decision is based primarily on outputs of the piezoelectric sensor attributable to the mechanical motion resulting from the expansion of the blood vessel rather than on outputs attributable to sounds from opening and closing of heart valves;

applying electrodes of a defibrillator to the patient;

using the pulse sensor to detect whether the patient has a pulse; and

delivering a defibrillation shock to the patient when the patient's condition, including whether the patient has a pulse, warrants delivery of the shock.

16. (Original) The method of claim 15 further comprising monitoring the pulse if present.

17. (Original) The method of claim 15 wherein the defibrillator has an ECG function and the method further comprises using the ECG function of the defibrillator to monitor the patient's heart rhythm.

18. (Original) The method of claim 15 further comprising analyzing the pulse and heart rhythm to determine the appropriate treatment for the patient.

19. (Original) The method of claim 18 wherein the analyzing step includes determining whether the patient's pulse, if present, is correlated with the R-wave of the patient's heart rhythm.

20. (Original) The method of claim 19 wherein, if the determination is positive, no ECG analysis is performed.

21. (Original) The method of claim 18 wherein the analyzing step includes determining whether the ECG rhythm is treatable with defibrillation.

22. (Original) The method of claim 21 further comprising, if the determination is positive, delivering a shock to the patient using the defibrillator.

23. (Original) The method of claim 22 further comprising delivering a predetermined number of shocks to the patient, and then subsequently determining whether the patient's pulse, if present, is correlated with the R-wave of the patient's heart rhythm.

24. (Original) The method of claim 23 further comprising, if the subsequent determination is negative, administering CPR to the patient.

25. (Original) The method of claim 24 further comprising using the pulse sensor to determine the efficacy of the CPR treatment.

26. (Original) The method of claim 15 wherein the pulse sensor comprises a piezoelectric polymer film.

27. (Original) The method of claim 15 wherein the pulse sensor is mounted on an elastic strap.

28. (Original) The method of claim 27 further comprising attaching the elastic strap around the patient's neck.

29. (Original) The method of claim 15 wherein the pulse sensor is mounted on one of the electrodes of the defibrillator.

30. (Original) The method of claim 15 wherein the pulse sensor further comprises a foam layer.

31. (Original) The method of claim 15 wherein the pulse sensor is self-shielded.

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32. (Original) The method of claim 15 further comprising attaching the pulse sensor to a patient using a clip, patch or suction device.

33. (Original) The method of claim 32 wherein the pulse sensor is attached to the patient's neck.

34. (Original) The method of claim 32 wherein the pulse sensor is attached to a pulse point other than on the patient's neck.

35. (Currently Amended) A method of treating a patient showing signs of possible cardiac arrest comprising:

applying a piezoelectric pulse sensor to the patient at a location near a blood vessel that expands as a result of blood pulsing through the vessel, the piezoelectric pulse sensor being configured to detect mechanical motion resulting from the expansion of the blood vessel;

processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse, wherein the decision is based primarily on outputs of the piezoelectric sensor attributable to the mechanical motion resulting from the expansion of the blood vessel rather than on outputs attributable to sounds from opening and closing of heart valves;

using the pulse sensor to detect whether the patient has a pulse;

using the pulse sensor to determine whether to apply electrodes of a defibrillator to the patient; and

delivering a defibrillation shock to the patient when the patient's condition, including whether the patient has a pulse, warrants delivery of the shock.

36. (Withdrawn) A method of treating a patient showing signs of possible cardiac arrest comprising:

applying a piezoelectric pulse sensor to the patient;

using the pulse sensor to detect whether the patient has a pulse; and

using the pulse sensor to determine whether to perform CPR on the patient.

37. (Withdrawn) The external defibrillator of claim 1 further comprising a clip, patch or suction device constructed to attach the pulse sensor to a patient.

38. (Withdrawn) The external defibrillator of claim 1 wherein said external defibrillator comprises an automated defibrillator.

39. (New) A method of detecting whether a patient has a pulse, the method comprising:

applying a piezoelectric pulse sensor to the patient at a location near a blood vessel that expands as a result of blood pulsing through the vessel, the piezoelectric pulse sensor being configured to detect mechanical motion resulting from the expansion of the blood vessel;

processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse, wherein the decision is based primarily on outputs of the piezoelectric sensor attributable to the mechanical motion resulting from the expansion of the blood vessel rather than on outputs attributable to sounds from opening and closing of heart valves.

40. (New) The method of claim 39 wherein the piezoelectric pulse sensor is configured to be primarily sensitive to a longitudinal stress rather than a sound pressure wave front.

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41. (New) The method of claim 39 wherein the pulse sensor is placed in the vicinity of the carotid artery in the neck.